

CLAIMS

- 5 1. An uninterruptible power supply (UPS) system comprising:
 one or more frame components, of which a first frame component is adapted to hold at
least one of a plurality of modules including at least one power module and at least one battery
module, the frame component being capable of being installed as a stand alone unit or being
installed as part of a rack-mounted system.
- 10 2. The UPS system according to claim 1, wherein the UPS system includes a second
frame component, the second frame component being adaptively coupled to the first frame
component and being capable of holding one or more modules.
- 15 3. The UPS system according to claim 2, wherein the second frame component is
adaptively coupled to the first frame component by at least two support members attached to
respective side portions of the first frame component and the second frame component.
- 20 4. The UPS system according to claim 1, the UPS system further comprising a door
component that is removably mounted to a front side of the UPS system.
- 25 5. The UPS system according to claim 4, the UPS system further comprising a door
component that includes a plurality of faceplate components, the number of faceplate
components depending at least in part on the height of the one or more frame components.
- 30 6. The UPS system according to claim 5, wherein at least one of the plurality of faceplate
components may be used in two different doors having different heights.
7. The UPS system according to claim 4, wherein the door component includes at least
one bezel component that may be installed in at least one other door component that has a
different height than the door component.

8. The UPS system according to claim 4, the door component including a plurality of side pieces that are each formed to suit the height of the UPS system.

9. The UPS system according to claim 4, wherein the door component is adapted to accept a plurality of bezel components, wherein the number of the plurality of bezels accepted by the door component depends on the door height.

10. The UPS system according to claim 9, wherein the door component further comprises a frame, and wherein at least one of the plurality of bezel components is attached removably within the door frame is removable independently of the other of the plurality of bezel components.

11. The UPS system according to claim 9, wherein the at least one of the plurality of bezel components includes an acrylic plastic.

12. The UPS system according to claim 4, wherein the door component is removable from the front of the UPS system.

13. The UPS system according to claim 12, wherein the door component is removably attached at a bottom edge of the door to a frame of the UPS system.

14. The UPS system according to claim 12, wherein the door component is removably attached at a top edge of the door to a frame of the UPS system.

15. The UPS system according to claim 1, wherein the first frame component, if configured in a stand-alone unit, further comprises a plurality of covers, at least one of which is coupled to an exterior surface of the first frame component.

16. The UPS system according to claim 1, wherein the UPS system is in a standalone configuration, and wherein the first frame component is capable of accepting at least one or more casters.

17. The UPS system according to claim 2, the UPS system further comprising a battery module, the battery module being capable of being installed in the first frame component in a first orientation, and the battery module being capable of being installed in the second frame component in a second orientation.

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18. The UPS system according to claim 17, wherein the first orientation and the second orientation are not the same orientation.

19. The UPS system according to claim 1, wherein the first frame component, if installed in a rack-mounted UPS system, includes a support member coupled to the rack and supporting, from underneath the first frame component, the first frame component as it is positioned in the rack.

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20. The UPS system according to claim 19, wherein the support member includes a secondary support member that, when the first frame component is positioned in the rack, prohibits vertical movement of the first frame component.

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21. The UPS system according to claim 20, wherein the secondary support member is adaptively coupled to the first frame component through an opening in the first frame component when the first frame component is fully inserted in the rack.

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22. The UPS system according to claim 21, wherein the secondary support member is adaptively coupled to the first frame component without requiring rear access to the rack.

23. The UPS system according to claim 19, wherein the support member includes an associated support member positioned in an opposing side of the rack, the associated support supporting from underneath the first frame component, the first frame component as it is positioned in the rack.

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24. A battery module associated with one or more modular uninterruptible power supply (UPS) system units, the UPS system units including at least two different frame types, each of which include a respective at least one frame portion in which the battery module is located,

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the battery module being capable of being oriented in at least one of a plurality of orientations within the at least one frame portion of the two different frame types, respectively.

25. The battery module according to claim 24, further comprising a connector that is connectable in at least two different orientations.

26. The battery module according to claim 25, wherein the connector is an electrical connector.

27. The battery module according to claim 26, wherein the electrical connector is adapted to provide backup power to one or more loads associated with the UPS system.

28. The battery module according to claim 24, the battery module further comprising a handle for inserting and removing the battery module, the handle having at least two different orientations.

29. The battery module according to claim 24, the battery module further comprising a first alignment element that is coupled to a second alignment element associated with a first frame portion of one of at least two different frame types in which the battery module is inserted when the battery module is in a first orientation with respect to the first frame portion, and wherein the battery module further comprises a third alignment element that is coupled to a fourth alignment element associated with a second frame portion of another of at least two different frame types in which the battery module is inserted when the battery module is in a second orientation with respect to the second frame portion.

30. The battery module according to claim 24, wherein the battery module is installed as part of a UPS system comprising a core frame type and an expansion frame type, the expansion frame type being capable of storing additional battery modules, wherein the battery module is capable of being inserted in the expansion frame type in a different orientation than that of a battery module installed in the core frame type.

31. The battery module according to claim 30, wherein the battery installed in the core frame type and the battery installed in the expansion frame type are the same type of battery module.

5 32. The battery module according to claim 30, wherein the same battery type is used in the core UPS frame type and the expansion frame type.

33. A support rail for a rack-mounted system, comprising:

an element that couples the support rail to a front vertical rack mount rail;

10 an element that couples the support rail to a rear vertical rack mount rail;

a ledge piece that supports the rack-mounted system from underneath the rack-mounted system; and

a rear support member, that, when the rack-mounted system is inserted into the rack, secures the rack-mounted system from moving in a vertical direction.

15 34. The support rail according to claim 33, wherein the rear support member is a c-shaped portion that engages an opening of the rack-mounted system.

35. The support rail according to claim 33, wherein the support rail is adapted to be
20 installed on an interior side of the rack, and wherein the ledge piece extends into the interior of the rack.

36. The support rail according to claim 33, wherein the support rail includes a first and second rail portions, the first rail portion being insertable within the second rail portion,
25 allowing the support rail to be extended to varying lengths between front and rear vertical mount rails.

37. The support rail according to claim 33, wherein the support rail is made at least in part of steel material.

38. The support rail according to claim 33, wherein the support rail is installed as part of a support system including another support rail positioned on opposite vertical rails within the rack.

5 39. A module for use in a modular uninterruptible power supply (UPS) system, the UPS providing backup power to one or more electrical loads, the module comprising input signal conditioning and switching components.

10 40. The module according to claim 39, wherein the switching components are bypass switching components used to bypass power module components.

41. The module according to claim 39, the module further comprising:
an input circuit breaker that receives an input power supply, the circuit breaker having one or more alternating current (AC) outputs;

15 a filter circuit that is coupled to the one or more outputs of the input circuit breaker, and provides one or more filtered AC outputs;

a relay element that receives one or more filtered AC outputs, and provides the one or more filtered AC outputs to a backplane component; and

20 a bypass switching element that receives the filtered AC outputs and is adapted to bypass the relay element to provide electrical signals associated with the filtered AC output directly to the one or more electrical loads.